

Headquarters U.S. Air Force

Integrity - Service - Excellence

Financial Viability

Module # 8



**Economic
Analysis**

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**Financial
Modeling**

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Headquarters U.S. Air Force

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Economic Analysis



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Economic Analysis

TYPES OF ECONOMIC ANALYSIS

1. Primary Analysis

2. Secondary Analysis



Economic Analysis

The Seven (7) Step Process

- 1. Establish and State Objectives**
- 2. Identify Alternatives**
- 3. Formulate Assumptions**
- 4. Determine Cost and Benefits**
- 5. Compare Alternatives**
- 6. Perform Sensitivity Analysis**
- 7. Report Results and Recommendations**



Economic Analysis

Step 1

Step 1: Establish and State Objectives

- **The statement of objective should clearly define and quantify (to the extent possible) the function to be accomplished.**
- **To provide for quarters for 100 AF personnel and families.**
- **To construct 100 new houses for AF personnel and families**



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Economic Analysis

Step 2

Step 2: Identifying Alternatives

- **Status Quo**
- **Privatization**
- **Identical MILCON**
- **Constrained MILCON**
- **Current Basic Allowance for Housing (BAH)**
- **Full BAH (No Out-of-Pocket Expenses)**



Step 3: Formulating Assumptions

- **EAs are future oriented that are focused on current decisions which have benefits and cost implications for future years**
- **EAs should be based on “FACTS”**
 - **However, since the future is not completely known with certainty, it is often necessary to make assumptions in order to proceed with the EA**
 - **Life of an asset**
 - **Future requirements for a particular function**



Step 4: Determine Cost and Benefits

■ Life Cycle Cost

- The Life Cycle Cost Report provides an overview of all the detailed cost associated with a particular alternative on a year-by-year basis.**

■ Benefits

- To Airmen**
- To Air Force**



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Economic Analysis

Step 5

Step 5: Comparing Alternatives

- **The comparison of the cost and benefits is the central focus of the EA process.**



Economic Analysis

Step 6

Step 6: Performing Sensitivity Analysis

- **Performed when there are large uncertainties about cost, timing, or inputs of data or when the results of the comparison steps does not reveal a clearly superior alternative**
- **Allows the analyst to consider a “WHAT IF” process to determine how critical the assumptions used in the EA are to the EA results**



Economic Analysis

Step 6

Step 6: Performing Sensitivity Analysis (Cont'd)

- **Variance of BAH Expense Item**
- **Variance of MILCON Expense Item**
- **Variance of Routine O&M Expense**
- **Discount Rate Sensitivity Analysis**



Step 7: Summary and Recommendations

- **Statement of Objective**
- **Requirements not met**
- **Definitions of Alternatives**
- **Explanation of Assumptions (costs, benefits, data and sources)**
- **Comparative Ranking of Alternatives (based on cost, and benefits)**
- **Sensitivity Analysis Results**



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Financial Modeling



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- **HRSO Proforma**
- **HRSO Quick Score Model**
- **Scoring**
- **Proforma Demonstration**
- **HRSO Proforma Deficiencies**
- **Air Force Proforma**



HRSO Proforma

Basic tool

- **Calculates development costs**
- **Identifies available market financing**
- **Projects anticipated cash flows**
- **Seeks to close development gap**
- **Determines participation levels**
- **Computes scoring impact**
- **Used as benchmark for analyzing submittals**
- **Government and PSC access only**



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HRSO Proforma (Cont'd)

Financial Inputs

- **Vacancy rates**
- **OMB risk and recovery factors/treasury rates**
- **Loan information**
- **Basic Allowance for Housing (BAH)**
- **Utility rates**





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HRSO Proforma (Cont'd)

Financial Inputs (Cont'd)

- **Asset contributions**
- **Conveyed units/property**
- **Demolition/Renovation/Construction timelines and costs**
- **Personnel assignments**
- **Local Property taxes**



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HRSO Quick Score

- **Used only by Developers**
- **Projects scoring impact of proposal**
- **Allows for a uniform comparison of proposals**



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HRSO Quick Score

Microsoft Excel - Briefing Version, HRSO Blank Quick Score Version 1.xls

File Edit View Insert Format Tools Data Window Help

Arial 10 B I U

F30 =

HRSO Quick Score

General Information

Project Start Fiscal Year: 2001
Year of Take-Out: 51

Loan Information

A. First Mortgage

Loan Amount: \$ -
Loan Type: Private
Percent Guaranteed: 0.00%
Amortization Period (Years): 30
Interest Rate: 7.15%
Deferral Periods (Years): 0
Interest Rate During Deferral: 0.00%
Interest Paid During Deferral?: No
Subsidy Rate: 0.00%

Scoring

First Mortgage Scoring: \$ -

Main Loans Instructions

Ready



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HRSO Quick Score

Microsoft Excel - Briefing Version, HRSO Blank Quick Score Version 1.xls

File Edit View Insert Format Tools Data Window Help

Arial Open 10 B I U 75%

F30 =

B. Second Mortgage

Loan Amount: \$ -

Loan Type: Direct

Percent Guaranteed: 100.00%

Amortization Period (Years): 30

Interest Rate: 6.31%

Deferral Periods (Years): 0

Interest Rate During Deferral: 0.00%

Interest Paid During Deferral: Yes

Subsidy Rate: 0.00%

Second Mortgage Scoring: \$ -

Limited guaranteed loans are guaranteed against base closure, down-sizing, and deployment only.

Subsidy rates are specific to loan rates and terms. Any changes to rates and terms will require recalculation of subsidy rates.

Total Government Investments & Payments

C.	Differential Lease Payments:	\$	-
D.	Rental/Occupancy City/Leasing:	\$	-
E.	Provisions of Goods & Services:	\$	-
F.	Investment Amount:	\$	-

Scoring

	\$	-
	\$	-
	\$	-
	\$	-

Total Scoring: \$ -

Main Loans Instructions

Ready NUM



Scoring

- **What is scoring**
- **What determines the initial amount**
- **What are it's components**
- **What determines the final amount**
- **Does it add to development costs**



Scoring (Cont'd)

What is scoring

- **Funds to cover potential future costs**
- **Determines recorded obligations**
- **All projects must be scored**



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Scoring (Cont'd)

What determines the initial amount

- **Results from FHMP**
- **Includes a number of factors**
- **Complex, secret computer algorithm**



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Scoring (Cont'd)

What are it's components

- **Default Subsidies**
- **Interest Subsidies**



Scoring (Cont'd)

What determines the final amount

- **HRSO proforma revises initial amount**
- **Accepted proposal sets final amount**



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Scoring (Cont'd)

Scoring is not a part of the development costs

- **Deposited into the FHIF**
- **Loses all Service connected association**



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Proforma

Proforma Demonstration





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Proforma

Microsoft Excel - Briefing Version, HRSO Proforma 1.0H.xls

File Edit View Schedule Solver Window Help

EI430

AFCEE

General Information & Scenario Description

General Information

Date:

Scenario Creator:

Project: **AFCEE**

Scenario Name:

Project Start Fiscal Year: **2002**

Scenario Description

Double-click to enter text

Ready

Start | Inbox - Microsoft Outlook | Microsoft PowerPoint - [Dr... | Exploring - V:\DCP\Finan... | Microsoft Excel - Bri... | 11:38 AM



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HRSO Proforma Deficiencies

- **Can only be used with Excel 95**
- **Construction loan take out**
- **Timing of NOI during new construction**
- **Limited ten year development period**
- **No Consistency with Lock Box requirements**
- **Incomplete calculation of IRR**



Air Force's New Proforma

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Enhancements

- **Does not require Excel 95**
- **Assignment Schedule input as whole numbers**
- **Expense input follows RFP**

Platform

- **Written in Visual Basic**
- **Compatible with Air Force PCs**
- **Excel Based Reports**
- **Works like current proforma**



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Questions?

